

WHAT IS CLAIMED IS:

1. A mode-locked fiber laser comprising a pair of reflectors, an amplifying fiber disposed as laser medium between said reflectors and having a waveguide, and a saturable absorber affixed in a direction of one end of said amplifying fiber to one of the reflectors, wherein at least the end face of the waveguide at one end of said amplifying fiber is enveloped with said saturable absorber.

2. A mode-locked fiber laser comprising a pair of reflectors, an amplifying fiber disposed as laser medium between said reflectors and having a waveguide, and a saturable absorber disposed between one of said reflectors and one end of said amplifying fiber, wherein at least the end face of the waveguide at one end of said amplifying fiber is enveloped with said saturable absorber, and one of said reflectors is formed in a shape having the focusing point matched on the end face of the waveguide at one end side of said amplifying fiber, incorporates said saturable absorber, and is fixed at one end side of said amplifying fiber.

3. The mode-locked fiber laser of claim 2, further comprising: an in-line fiber Faraday rotator integrated with
said amplifying fiber.